

## Message

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**Subject:** OPPT/OPP/OCSP Clips 4/10

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# Bee Pesticides

Daily Mail

**'Bee-safe' pesticide used to replace banned neonicotinoids could be accidentally KILLING off the insects**

<https://www.dailymail.co.uk/sciencetech/article-6907355/Bee-safe-pesticide-used-replace-banned-neonics-accidentally-KILLING-insects.html>

Ian Randall

Posted: 12:20pm, April 10, 2019

- Flupyradifurone was intended as a replacement for controversial neonicotinoids
- Environmental agencies had previously said the new insecticide was 'bee-safe'
- But use alongside a common fungicide can hurt and kill the important pollinators
- Safety checks overlook joint effects, seasonal changes and bee ages experts say
- Findings raise concerns about the safety of other currently approved treatments

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A widely used pesticide that had been classified as being 'bee-safe' may in fact cause the pollinating insects harm when used in tandem with a common fungicide.

The pesticide, flupyradifurone, was touted as a better alternative to the controversial and now-restricted neonicotinoid family of chemicals.

But researchers have shown that, under certain conditions, it can render bees sluggish and uncoordinated.

With solo pesticide approvals not factoring in how treatments can interact, concerns should be raised over the safety of currently approved pesticides, the experts say.

- **A widely used pesticide that had been classified as being 'bee-safe' may in fact cause the pollinating insects harm when used in tandem with a common fungicide, rendering bees sluggish and uncoordinated**

Much controversy has surrounded the use of neonicotinoid pest sprays - which are commonly dubbed 'neonics' - after it was demonstrated that they had harmful impacts on bee populations.

Following many bans on the chemicals around the globe, farmers have turned to more environmentally-friendly alternatives.

One such insecticide is flupyradifurone - which has a similar mode of action and systemic properties as the now restricted neonics.

Despite working in a similar way, flupyradifurone is chemically distinct from neonics - meaning that, as it is also a relatively new product, few pests are presently resistant to its effects.

Previous research has suggested that the compound's toxic effects were favourable - with the pesticide accordingly having been designated (for example, by the US Environmental Protection Agency) as being relatively 'bee safe'.

In theory, this would mean that flupyradifurone can be used while bees are actively foraging, without causing them harm.

Now, researchers from the University of California San Diego in the US and the EU Reference Laboratory for Honeybee Health in France have explored how bee-safe flupyradifurone is under a variety of conditions.

They treated bees with doses that would match the levels of pesticide the pollinators would likely encounter out in the real world.

The researches found that when flupyradifurone is used in combination with the common fungicide propiconazole, the combination of the two treatments causes bees harm and increased their chance of as the different sets of side-effects interact.

As honey bees buzz around the countryside collecting pollen, they often get exposed to many different types of pesticides, which can also vary across the seasons.

Flupyradifurone and propiconazole, in particular, are commonly applied to the same fields.

Exposed bees demonstrated symptoms including apathy, poor coordination and hyperactive behaviour - all of which reduce their chances of continued survival.

- **With solo pesticide approvals not factoring in how treatments can interact, concerns should be raised over the safety of currently approved pesticides, the experts say**

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The team found that foraging worker bees were four-times more susceptible to the effects of the chemicals than their hive-bound counterparts, likely due to their typical lower weight and older age.

'This result is troubling because the official guidelines for pesticide risk assessment only test in-hive bees,' wrote the researchers.

Further concern, they add, comes from how 'foragers are particularly at risk of pesticide exposure since they forage in the field.'

Both types of bee were also more heavily impacted during the summer months.

'Risk assessment requires relatively limited tests that only marginally address bee behaviour and do not consider the influence of bee age and season,' write the researchers.

They conclude: 'Our results raise concerns about the safety of approved pesticides - including flupyradifurone.'

The full findings of the study were published in the journal [Proceedings of the Royal Society B: Biological Sciences](#).

Neonicotinoids are neuro-active chemicals similar to nicotine that have proved to be highly effective at protecting crops from pests, especially aphids and root-eating grubs.

They can either be sprayed on leaves or coated on seeds, in which case they infiltrate every part of the growing plant.

Years of research have shown that under controlled conditions the chemicals are toxic to honey bees and bumblebees, causing brain damage that can affect learning and memory and impair their ability to forage for nectar and pollen.

The chemicals are a key battleground in the environmental movement – with campaigners demanding a 'complete and permanent' ban on the pesticides as they are suspected to be harmful to bees.

Only two to 20 per cent of the neonicotinoids, which are still used on crops such as wheat, are taken up and the rest is left on the soil.

Samples taken in October revealed 75 per cent of samples from around the world contain the chemicals.

Researchers tested 198 honey samples and found three out of four were laced with at least one of the neonicotinoid chemicals.

For the study, an international team of European researchers tested almost 200 honey samples from around the world for residues left by five different neonicotinoids.

While in most cases the levels were well below the EU safety limits for human consumption, there were exceptions.

Honey from both Germany and Poland exceeded maximum residue levels (MRLs) for combined neonicotinoids while samples from Japan reached 45 per cent of the limits.

Samples from England had neonicotinoid levels that were no more than 1.36 per cent of the amount thought to be safe for human consumption.

## **Independent**

### **New 'Safe' pesticides to replace banned chemicals still hurt bees, scientists say**

<https://www.independent.co.uk/environment/pesticides-bees-safe-ban-insects-pollination-sivanto-neonicotinoids-a8861981.html>

**Josh Gabbatiss**

**Posted: 2:30am, April 10, 2019**

New pesticides regarded as “bee safe” could actually be causing harm to these vital pollinators when combined with other chemicals being applied to crops, according to a new study.

Since a range of bee-harming substances were banned in the UK and the rest of Europe, there has been growing pressure to find replacements.

However, experts have voiced concerns that some of these pesticides may come with dangerous side effects of their own.

While flupyradifurone has been marketed as a safer insecticide, it has the same mode of action and properties as neonicotinoids, the chemicals banned due to their link with global bee declines.

Sold by Bayer under the brand name Sivanto, the product is already available in the US, Italy, Greece and the Netherlands, but not the UK.

But its similarity to neonicotinoids has led some scientists and campaign groups to cast doubt on its “bee safe” status, especially following the [European Union’s](#) decision to approve it in 2015.

In the new study, scientists at the University of California, San Diego assessed what happened when honeybees were exposed to realistic doses of flupyradifurone in combination with a common fungicide.

They found the dual action of these chemicals led to abnormal behaviour and death in many of the [bees](#) tested, with the workers that left the nest to forage on crops more likely to feel the effects.

Their work, published in the journal *Proceedings of the Royal Society B* was partly funded by the campaign group Avaaz, which played a major role in the effort to ban neonicotinoids.

It comes after previous work found [another chemical touted](#) as a replacement for bee-harming chemicals, sulfoxaflor, was linked to disruption in bee colonies.

After the EU authorised both sulfoxaflor and flupyradifurone in 2015, campaign group the Pesticide Action Network said both chemicals were so similar to neonicotinoids it was wrong to consider them separately.

Dr David Spurgeon, an ecotoxicologist at the Centre for Ecology and Hydrology who was not involved in the study, noted the difficulty of categorising a pesticide as “safe” for bees.

He said without a full understanding of the genetics of each bee species, it would be difficult to rule out any harmful effects.

“Without that knowledge it would be difficult to say something is fully ‘bee safe’ for all species as such,” he said.

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Dr Spurgeon noted that previous work at the centre had revealed neonicotinoids working together with fungicides to cause harm, and said it would be “no surprise” if something similar happened with these newer chemicals.

The scientists behind the new research said their work revealed a need for more detailed risk assessments that took into account the interactions between different chemicals in the environment.

A spokesperson for Bayer told *The Independent*: “Sivanto is one of the latest innovations that further our commitment to bee health and it has been approved for use by governments around the world because of its effectiveness in protecting crops from damaging pests while not posing risk for honey and bumble bees colonies when used as directed.

"The principle behind the observations reported by the new research (i.e synergistic effects of certain fungicides, increasing the toxicity of certain insecticides) are well known to us. We have implemented restrictions for the use of FPF with azole fungicides in order to prevent this type of effect under practical use conditions."

## Newsweek

### Flupyradifurone: 'Bee Safe' Pesticide May Not Actually Be Very Safe For Bees After All

<https://www.newsweek.com/flupyradifurone-bee-safe-pesticide-bees-1390422>

Aristos Georgiou

Posted: 12:10am, April 10, 2019

In recent years, concern has grown about the effects of agricultural pesticides on the health of bees, with much of the attention focused on so-called "neonicotinoids," or "neonics" for short.

As the use of neonics has become more and more restricted, manufacturers have developed pesticides that are considered "bee safe." However, one of these substances, flupyradifurone (FPF)—sold under the name Sivanto—may cause harm to bees when a common fungicide is also present. That's according to a study published in the journal *Proceedings of the Royal Society B: Biological Sciences*.

FPF works in a similar way to neonics. However, because it is marked as "bee safe," it can be used while the insects are actively foraging.

"The process that leads to defining the safety of a pesticide take into consideration a series of specific tests, which are aimed at testing the effects of the chemical on honeybees," Simone Tosi, lead author of the study from the University of California, San Diego, told *Newsweek*. "The results of these trials will lead to the approval or not of this pesticide for certain uses in the field."

The authors of the study say that their new findings bring into question the safety of approved pesticides because risk assessments do not currently take into account how toxicity is influenced by combinations between different chemicals.

"Bees can be exposed to multiple pesticides that may interact synergistically, amplifying their side effects," the authors wrote in the paper.

To date, the impacts of FPF have not been thoroughly investigated. Accordingly, for their study, the researchers decided to test the lethal and sub-lethal toxic effects of the chemical on honeybees over different seasons and for different worker types, as well as the substance's interactions with a common fungicide known as propiconazole (PRO.) They used doses designed to mimic the quantities that the insects are exposed to in real-life situations.

"We realized there is an important data gap on what is tested to assess the risk of pesticides, and the actual effects that pesticides could pose: for a long time, we have underestimated the extent of pesticide effects on bees," Tosi said. "Thus, we decided to explore the role pesticides have on bee health more thoroughly, assessing their effects with a more holistic approach that takes into consideration how pesticide toxicity changes in relation to the complex environment bees live in."

The scientists found that bees exposed to FPF, in combination with the fungicide demonstrated poor coordination, hyperactivity and apathy, potentially affecting their chances of survival.

Furthermore, they found that these effects were significantly influenced by worker type and season: forager bees were four times more affected than in-hive bees, and both groups were more affected in the summer months compared to the spring. These findings are concerning given that both chemicals are often found together in the environment, the researchers say.

"Although the product label prohibits flupyradifurone from being mixed in an application tank with certain fungicides including PRO, bees can be simultaneously exposed to FPF and other chemicals—forming pesticide “cocktails”—that are commonly used in adjacent crops or that persist over time," Tosi said. "FPF and PRO are used on the same crops and ornamentals, including fruits, oilseeds and cereals."

"These pesticides can also be used multiple times over a year—and over different seasons—and applied in multiple ways," Tosi said. "In addition, bees can also be exposed to pesticides that drift from different crops or are stored in the same hive. FPF and PRO are easily taken up by plants and thus contaminated soil and water may lead to unintended absorption. This could result in prolonged, multi-year contamination."

The graphic below, provided by [Statista](#), illustrates the global decline of different insect populations. The authors say that their latest findings could have significant implications for how certain pesticides are approved for use.

"This work is a step forward toward a better understanding of the risks that pesticides could pose to bees and the environment," Tosi said. "We provide the first demonstration that the combination of two pesticides can synergistically increase the frequency of pollinators with abnormal behaviours, and suggest methodologies that could be implemented for assessing the risks caused by pesticides."

"Our results highlight the importance of assessing the effects pesticides have on the behaviour of animals, and demonstrate that synergism, seasonality and bee age are key factors that subtly change pesticide toxicity," he said.

Though research into FPF has been limited, one previous study found that the chemical impaired bee taste and cognition when exposed to high, non-field-realistic doses. Another paper found that chronic exposure had an impact on the animals' olfactory system.

#### **Phys.org**

##### **Pesticide cocktail can harm honeybees**

<https://phys.org/news/2019-04-pesticide-cocktail-honey-bees.html>

**University of California San Diego**

**Posted: April 10, 2019**

A recently approved pesticide growing in popularity around the world was developed as a "bee safe" product, designed to kill a broad spectrum of insect pests but not harm pollinators.

A series of tests conducted over several years by scientists at the University of California San Diego focused on better investigating the effects of this chemical. They have shown for the first time that Sivanto, developed by Bayer CropScience AG and first registered for commercial use in 2014, could in fact pose a range of threats to honey bees depending on seasonality, bee age and use in combination with common chemicals such as fungicides.

The study, led by former UC San Diego postdoctoral fellow Simone Tosi, now at ANSES, University Paris Est, and Biological Sciences Professor James Nieh, is published April 10 in *Proceedings of the Royal Society B*.

Pesticides are a leading health threat to bees. After years of growing concerns about systemic toxic pesticides such as neonicotinoids and their harm on pollinators, Sivanto was developed as a next-generation product.

Sivanto's "bee safe" classification allows it to be used on blooming crops with actively foraging bees. Currently, pesticides are approved for widespread use with only limited testing. Perhaps most importantly, the interactions between new pesticides and other common chemicals such as fungicides are not fully tested. Sivanto's product label does prohibit the pesticide from being mixed in an application tank with certain fungicides. However, bees can still be

exposed to Sivanto and other chemicals (pesticide "cocktails") that are commonly used in adjacent crops or that persist over time.

Starting in 2016, after reviewing documents describing Sivanto's risk assessments, the scientists conducted several honey bee (*Apis mellifera*) studies investigating effects that were not previously tested, particularly the behavioral effects of chemical cocktails, seasonality and bee age. The scientists provided the first demonstration that pesticide cocktails reduce honey bee survival and increase abnormal behaviors. They showed that worst-case, field-realistic doses of Sivanto, in combination with a common fungicide, can synergistically harm bee behavior and survival, depending upon season and bee age. Bees suffered greater mortality—compared with control groups observed under normal conditions—and exhibited abnormal behavior, including poor coordination, hyperactivity and apathy.

The results are troubling, the researchers say, because the official guidelines for pesticide risk assessment call for testing in-hive bees, likely underestimating the pesticide risks to foragers. Honey bees have a division of labor in which workers that are younger typically work inside the colony (in-hive bees) and foragers work outside the colony. Foragers are therefore more likely to be exposed to pesticides.

"We found foragers more susceptible," said Nieh. "They tend to be older bees and therefore because of their age they can suffer greater harm."

The harmful effects of Sivanto were four-times greater with foragers than with in-hive bees, the UC San Diego study showed, threatening their foraging efficiency and survival. Both kinds of workers also were more strongly harmed in summer as compared to spring.

"This work is a step forward toward a better understanding of the risks that pesticides could pose to bees and the environment," said Tosi, a postdoctoral fellow and project manager at the Epidemiology Unit. According to the authors, the standard measurements of only lethal effects are insufficient for assessing the complexity of pesticide effects.

"Our results highlight the importance of assessing the effects pesticides have on the behavior of animals, and demonstrate that synergism, seasonality and bee age are key factors that subtly change pesticide toxicity," Tosi said. Cocktail effects are particularly relevant because bees are frequently exposed to multiple pesticides simultaneously.

"Because standard risk assessment requires relatively limited tests that only marginally address bee behavior and do not consider the influence of bee age and season, these results raise concerns about the safety of multiple approved pesticides, not only Sivanto," said Nieh, a professor in the Section of Ecology, Behavior and Evolution. "This research suggests that pesticide risk assessments should be refined to determine the effects of commonly encountered pesticide cocktails upon bee behavior and survival."

Sivanto is available in 30 countries in America, Africa, Asia and Europe, with 65 additional countries preparing to approve the product soon. Tosi points out that "because Sivanto was only recently approved, and no monitoring studies have yet investigated its co-occurrence with other pesticides after typical uses in the field, further studies are needed to better assess its actual environmental contamination, and consequent risk for pollinators."

"The idea that this pesticide is a silver bullet in the sense that it will kill all the bad things but preserve the good things is very alluring but deserves caution," said Nieh.

FIFRA

**EHS Daily Advisor**

**Plant Bio stimulants and FIFRA: Understanding the Regs**

<https://ehsdailyadvisor.blr.com/2019/04/plant-biostimulants-and-fifra-understanding-the-regs/>



When deciding whether to manufacture a new agricultural chemical, companies need to determine if their product will be subject to registration under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA). Registration is a costly, technically demanding, and prolonged process that, in conjunction with the sales forecast, may result in the firm deciding not to manufacture the product at all. Also, determining FIFRA applicability is not always straightforward, and the uncertainty inherent in the process may weigh against manufacture.

The EPA's Office of Chemical Safety and Pollution Prevention is addressing these and related concerns in a new draft guidance document on a category of agricultural products called *plant biostimulants* (PBSs). According to the Agency, some PBSs are exempt from FIFRA regulation, while others are not because they fit into the FIFRA definition of *plant regulators*.

The EPA is inviting comments on the draft guidance until May 28, 2019 (March 27, 2019, *Federal Register (FR)*).

#### Naturally Occurring Ingredients

The Agency notes that PBSs are a relatively new but growing category of products containing naturally occurring substances that aid healthful growth while not providing nutritionally relevant fertilizer benefits to the plant.

The potential confusion with PBSs starts with the absence of a definition, either under FIFRA or in the EPA's regulations. While the draft guidance does not offer a definition—which can only be developed through rulemaking—the Agency states that “generally speaking,” a PBS is “a naturally-occurring substance or microbe that is used either by itself or in combination with other naturally-occurring substances or microbes for the purpose of stimulating natural processes in plants or in the soil to, among other things, improve nutrient and/or water use efficiency by plants, help plants tolerate abiotic [i.e., not associated with living organisms] stress, or improve the physical, chemical, and/or biological characteristics of the soil as a medium for plant growth.”

#### Plant Regulators

While that general description may not suggest that PBSs are pesticides, which are intended to prevent, destroy, repel, or mitigate pests and are subject to FIFRA, the definition of a pesticide under FIFRA is broad. Included under that definition are plant regulators, which FIFRA does define as “any substance or mixture of substances intended, through physiological action, for accelerating or retarding the rate of growth or rate of maturation, or for otherwise altering the behavior of plants or the produce thereof.”

Based on the plant regulator definition, many PBS products and substances may be excluded or exempt from regulation under FIFRA because of their intended uses as plant nutrients (e.g., fertilizers), plant inoculants, soil amendments, and vitamin-hormone products. Other PBS products will not involve EPA oversight because they do not fit within the specific FIFRA definition of how a plant regulator functions. A key consideration is the claim made on the product label. In other words, regardless of the chemical composition of the PBS, if the label claims the PBS falls within the definition or mode of action of a plant regulator, then the PBS must be registered as a plant regulator.

#### Altering the Behavior of Plants

Based solely on the FIFRA definition, a naturally occurring PBS would be considered a plant regulator, a product label claim would be considered a plant regulator claim, and FIFRA registration would be required if the PBS:

- Accelerates or retards the rate of plant growth; these modes of action would cover substances that enhance/promote/stimulate fruit growth and development; promote stem elongation; stimulate roots/shoots; and stimulate cell division, cell differentiation, and cell enlargement.

- Accelerates or retards the rate of plant maturation; these modes of action would cover substances that accelerate/control/delay abscission/development/ripening/senescence; induce/promote/retard/suppress flowering; and induce/promote/retard/suppress bud break.
- Alters the behavior of plants; these modes of action would include substances that improve plant/tree shape/structure; control suckering; and inhibit/promote sprouting.
- Alters the produce of plants; these modes of action would include substances that enhance/promote crop/fruit/produce color/development/quality/shape and enhance/promote fruit growth and development.

The guidance also lists 25 EPA-registered naturally occurring plant regulator active ingredients with modes of action and associated product label claims that are consistent with the FIFRA definition of a plant regulator.

#### Exclusion Categories

Finally, to be categorized as a plant regulator, the substance or mixture of substances could not be listed under one of the exclusion categories at 40 CFR 152.6(f) and (g) as vitamin-hormone products, plant nutrients, plant inoculants, or soil amendments or under 40 CFR 152.8(f) as a fertilizer. The guidance provides tables with examples of PBSs that are considered nonpesticidal and are, therefore, exempt from FIFRA registration.

## Glyphosate

### Agripulse

#### New federal report takes 'cautious' approach to effects of glyphosate

<https://www.agri-pulse.com/articles/12090-new-federal-report-takes-cautious-approach-to-effects-of-glyphosate>

Steve Davies

Posted: 6:29am, April 10, 2019

A new federal [report](#) on glyphosate's toxicological effects likely will play a role in the ongoing debate — both in the court of public opinion and in courts of law — over the safety of the principal ingredient in Roundup.

The “toxicological profile” of glyphosate by the Agency for Toxic Substances and Disease Registry, part of the Centers for Disease Control and Prevention, summarizes studies on the herbicide's effects and recommends areas for further research.

But the part of the report that most people will probably turn to first, given the heated debate over Roundup's carcinogenicity, starts on page 53: Section 2.19-Cancer.

The conclusion of the health agency is open to interpretation. The profile said “most studies found no association between exposure to glyphosate-based products and risk of cancer,” but “a possible association between exposure to glyphosate and risk of non-Hodgkin's lymphoma could not be ruled out, based on conflicting results.”

Bayer spokeswoman Christi Dixon said, “We welcome another scientific perspective on what's the most studied substance of its kind, glyphosate. Our experts have not had the opportunity to fully review the ATSDR profile in full detail, but we support constructive dialogue and the scientific rigor that's inherent in the U.S. regulatory process.”

The company will participate in the public comment period, submitting “many of the same studies you see on our [transparency platform](#),” Dixon said. On Monday, Bayer [released](#) 107 studies Monsanto had submitted to the European Food Safety Authority as part of the authorization process in Europe.

Dixon added, “We continue to have full confidence in the safe use of glyphosate and believe that the extensive body of science, 40 years of real-world experience and the conclusions of regulators, including the U.S. EPA, European Food Safety Authority (EFSA), European Chemicals Agency (ECHA), German BfR, and Australian, Canadian, Korean, New Zealand and Japanese regulatory authorities, as well as the Joint FAO/WHO Meeting on Pesticide Residues (JMPR), confirm that glyphosate-based products are safe when used as directed and that glyphosate is not carcinogenic.”

Charles Benbrook, an ag economist who has quantified glyphosate use worldwide and believes there’s enough evidence to show that exposure to glyphosate-based herbicides — especially at high levels — increases the risk of NHL and other cancers, says ATSDR “does a good job dancing around” the carcinogenicity question, but ultimately does not agree with EPA’s determination last year that it is “not likely” to cause cancer.

Benbrook, who runs Benbrook Consulting in Troy, Ore., has testified for plaintiffs who are suing Monsanto (now owned by Bayer) in state and federal court in California, claiming exposure to Roundup was a substantial factor in causing their NHL. He is due to testify this week in the latest of those trials, *Pilliod v. Monsanto*, involving a husband and wife.

“ATSDR is extremely cautious,” he says. “Is ATSDR closer to IARC or EPA? They’re in between — they certainly did not support EPA’s final evaluation.”

Benbrook was referring to the International Agency for Research on Cancer, which [concluded](#) in 2015 that glyphosate is “probably carcinogenic to humans.” In December 2017, however, EPA [found](#) that glyphosate is “not likely” to cause cancer in humans.

But there are some significant differences between the two documents. EPA said “oral exposure is considered the primary route of concern for glyphosate,” while ATSDR said “dermal contact appears to be the major route of exposure to glyphosate for people involved in its application.” The report also said for the general population, “the main routes of exposure to glyphosate ... result from the ingestion of foods with residues of glyphosate and foods made from these crops, as well as dermal, ocular, or inhalation exposure from application of herbicides containing glyphosate.”

The plaintiffs in the cases in California thus far have been a groundskeeper for a school district and a homeowner who used Roundup extensively on his property for more than 20 years. Dewayne Johnson won \$289 million from a jury in state court before the judge knocked the award down to \$78 million. The other plaintiff, Edwin Hardeman, won about \$80 million from a six-person federal jury. Bayer is appealing the first verdict and is likely to appeal the second.

Benbrook says the ATSDR profile shows that people at greatest risk from glyphosate exposure are those who apply it directly, using a hand wand, backpack sprayer, or all-terrain vehicle, for example.

"It's a completely different exposure scenario" than you would find on a farm, where the applicator is enclosed in a cab, Benbrook said. "Most people are getting their most significant exposure at home" through application, not diet, Benbrook said.

But Val Giddings, a senior fellow at the Information Technology and Innovation Foundation who has written extensively about this topic, described Benbrook's comments as "speculative" and cited a Journal of the National Cancer Institute report showing glyphosate was not statistically significantly associated with cancer in a study of more than 50,000 applicators

"I am not aware of any general data on glyphosate exposure of different populations that support Benbrook's comments about exposure," Giddings added. "Farmers come into orders of magnitude greater contact with glyphosate than citizens."

**And he pointed out that any "concerns" about exposure to glyphosate at any level "must start with a consideration of its toxicity, which data show is less than that of table salt, baking soda, ibuprofen, coffee, to say nothing of wine or beer."**

Eliza Dunn, a medical doctor in toxicology at Bayer Crop Science, spent three hours deconstructing complex public health studies related to glyphosate and answering a broad range of questions from concerned ag leaders. Bayer, which now owns Monsanto, hosted the discussion at its West Sacramento facility this week.

**On the Monsanto lawsuit:** She described non-Hodgkin's lymphoma (NHL) as "about 30 to 60 different kinds of extraordinarily rare types of cancer." She said cancers caused from exposure involve a clear cause and effect seen over and over again and none of the NHL subgroups have shown that type of association.

In civil cases like this, convincing a jury over the empathy for a cancer victim is difficult. The jury would have to "sit through hours and hours and hours" of epidemiological and toxicological testimony, said Dunn, adding that a criminal case would be more thorough.

Another difference in the two documents: EPA says "dermal penetration has ... been shown to be relatively low for human skin (<1%) indicating dermal exposure will only contribute slightly to a systemic biological dose." ATSDR says "available dermal studies indicate that only 3-4 percent of dermally applied glyphosate enters the blood."

ATSDR made a number of recommendations for further research:

- "Studies should be designed to evaluate respiratory effects in animals exposed to glyphosate by inhalation."
- "Additional studies should be designed ... to determine whether glyphosate or other ingredients in glyphosate formulations are involved in developmental effects on male reproductive organs."
- "Human and animal studies should be designed to evaluate airborne exposure levels and possible health effects from inhalation exposure. Additional animal studies should be designed to assess the toxic effects of exposure to a variety of glyphosate formulations and individual components suspected to be toxic."
- "Studies are needed to investigate human intake of glyphosate via food and water, such as total diet studies."

- “Monitoring of children’s exposure to glyphosate would be useful, in combination with children’s health and susceptibility information, to assess the potential risk for deleterious effects.”

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#### **E&E News**

#### **Purdue defends herbicide, calls any ban 'devastating'**

<https://www.eenews.net/eedaily/stories/1060151629/search?keyword=EPA>

**Marc Heller**

**Posted: April 10, 2019**

Agriculture Secretary Sonny Perdue yesterday predicted dire results for farmers if the weed killer glyphosate is banned because of fears that it causes cancer.

"I think it'd be devastating," Perdue told the House Agriculture Appropriations Subcommittee at a hearing, as the farm chemical sold under the brand name Roundup faces a series of lawsuits.

In March, a San Francisco jury ordered Bayer AG, which owns Roundup maker Monsanto Co., to pay \$80 million in damages to a plaintiff who said the chemical caused his non-Hodgkin's lymphoma.

Perdue, testifying on his agency's budget request for the fiscal year beginning Oct. 1, said glyphosate is largely responsible for exponential increases in crop production in recent years and its continued use is critical to feeding a growing world population.

Glyphosate's potential role as a carcinogen has sparked one of the most intense debates in agriculture. A panel of the World Health Organization has said it's a probably carcinogen, but that finding is at odds with many other scientists, including at the National Institutes of Health and at EPA, which regulates its use.

The chemical is used widely on farms, and Monsanto has designed genetically modified corn that's bred for resistance.

Perdue addressed the issue in response to questions from Rep. Andy Harris (R-Md.), who said glyphosate is "exceedingly important" to farmers to maintain crop yields by killing weeds.

"I'm worried that it may disappear," Harris said.

If glyphosate did disappear, that would satisfy environmental and other groups that have been fighting for its demise. Groups complain that residue turns up in food.

The Environmental Working Group and organic food manufacturers have petitioned the Trump administration to sharply limit the amount of glyphosate residue allowed on oats and to block its use as a drying agent before oats are harvested.

In addition, a third glyphosate trial is underway in federal court, raising the prospects of more verdicts against the company and more monetary damages ordered. Agribusinesses that sell glyphosate may choose to stop doing so, Harris said, amid the legal controversy.

The farm chemical's troubles affect trade, as well, especially in Europe, where pressure to ban it is greater than in the United States.

Perdue said he calls the European Union a "technology-free zone" for its skepticism on technology and agriculture and added, "They will pay the price for this in the future."

On budget issues, Perdue faced bipartisan skepticism regarding the administration's proposal to cut discretionary spending at USDA by 21 percent compared to fiscal 2019. Bishop called the proposed cuts "wholly unacceptable," but Perdue said he views them as USDA sharing fiscal responsibility with other agencies.

Bishop directed much of his questioning at Perdue's moves to relocate the National Institute of Food and Agriculture and the Economic Research Service out of the nation's capital.

The department hasn't provided lawmakers with a cost-benefit analysis to justify the relocation, which would affect several hundred employees later this year.

A location, as well as more solid numbers, would be available once the list is whittled down, Perdue said.

The relocation will save money on rent and help recruit employees by putting offices in a lower-cost area, Perdue said — an assertion that hasn't convinced Democrats on the subcommittee.

"We don't see the problem," Bishop said.

## Healthline

### Planning to Use Roundup on Your Lawn? Here's What You Need to Know

<https://www.healthline.com/health-news/is-it-safe-for-you-to-use-roundup-weed-killer-on-your-lawn-this-spring>

Staff

Posted: April 10, 2019

Spring has sprung, and you've probably already started your backyard garden.

Chances are you may also be thinking ahead about what you're going to do to get rid of weeds.

You may also wonder if it's safe to use some of the weedkilling pesticides sold at your local store.

The answer to that question isn't a simple one.

It depends on which scientific studies you believe, how often you use weedkillers, and how you apply the pesticides.

The debate over glyphosate

Glyphosate, the main ingredient in the popular weedkiller Roundup and more than 750 other pesticides on the market, is back in the news.

And the news isn't exactly good.

Two California juries have recently awarded millions of dollars to workers diagnosed with cancer who blame the disease on the Roundup pesticide.

Last August, a San Francisco Superior Court jury awarded Dewayne Johnson \$289 million in his lawsuit against Monsanto, the company that makes Roundup.

Johnson, a former school groundskeeper diagnosed with non-Hodgkin's lymphoma, had used Roundup extensively. A judge later reduced his award to \$78 million.

Last month, a federal jury in San Francisco sided with Edwin Hardeman and awarded him more than \$80 million. The jury concluded that the Roundup weedkiller he'd used on his property for more than 25 years was a substantial factor in causing his cancer.

Monsanto and its parent company, Bayer, have maintained that Roundup is safe. Lawyers for the company are appealing both verdicts.

But there are hundreds of other cases in the pipeline.

Is the science settled?

The recommendations and findings on Roundup's possible cancer-causing properties have been all over the map.

The World Health Organization's (WHO) International Agency for Research on Cancer concluded that glyphosate was a probable cause of cancer in humans.

But the Environmental Protection Agency (EPA), the United Nation's pesticide review group, and the European Food Safety Authority have all concluded that glyphosate isn't likely to cause cancer in humans.

In February, a new scientific study suggested there's a "compelling link" between exposure to glyphosate weedkillers and non-Hodgkin's lymphoma.

The team of scientists concluded that people who are exposed to glyphosate at high levels have a 41 percent greater risk of developing non-Hodgkin's lymphoma than people who aren't exposed.

By midyear, the National Toxicology Program is expected to release the results of research it's currently conducting on glyphosate.

What should you believe?

Experts are also split on the safety of glyphosate.

Alex Berezow, PhD, is vice president of Scientific Affairs for the American Council on Science and Health, a pro-science consumer group.

"Glyphosate is safe to use, regardless of the brand," Berezow told Healthline. "The people who are exposed to the highest doses are farmers. But studies show that farmers don't have increasing rates of cancer despite the fact that more and more glyphosate has been used over the years."

We also asked Kara Cook, MA, to weigh in. She's the toxics program director for the U.S. Public Interest Research Group, a coalition of nonprofit organizations.

"At the current moment, there's no commonly agreed upon safe level of glyphosate," Cook told Healthline. "We're asking the EPA to do a new evaluation of glyphosate that's based only on independent studies and science while taking the WHO's determination that glyphosate is a probable carcinogen into account."

So, what should you do?

With so many pesticides containing glyphosate, consumers are left with lots of questions.

Is it safe to use pesticides? If so, how much pesticide can be used? How often? Is it safer to wear goggles, a mask, gloves, or shoe covers?

We reached out to the National Pesticide Information Center (NPIC) at Oregon State University for some answers. The NPIC provides science-based information.

The words "safe" and "dangerous" are misleading, according to the NPIC. Any chemical can pose a risk. Your risk depends on your exposure and the chemical's toxicity.



The organization says if you decide to use a pesticide product, reduce your risk by minimizing your exposure to it.

Here are some tips from the NPIC:

- Read and follow the label instructions.
- Keep children and pets away from the area where you'll be using the product.
- Wear protective clothing and equipment.
- If your garden is near your house, close the doors and windows and turn off the air conditioning.
- Don't use a high-pressure spray setting. The particles will linger in the air.
- If you walk in the treated areas, take your shoes off before going back inside your home.
- When you're done, wash your hands, face, and clothing.

## Hemp and Pesticides

Vice

**Help Is Good, but Probably Won't Save America's Struggling Farmers**

[https://www.vice.com/en\\_us/article/wjved4/hemp-is-good-but-probably-wont-save-americas-struggling-farmers](https://www.vice.com/en_us/article/wjved4/hemp-is-good-but-probably-wont-save-americas-struggling-farmers)

About an hour and a half north of Indianapolis lies the small town of Converse, Indiana, where, for over 175 years, Mark Boyer's family has tended the same piece of land. While Boyer mostly grows row crops—corn, soy, and wheat—he's working on diversifying into hemp. Seven years ago, he built his own cold press and started producing seed oils like sunflower and canola under the name Healthy Hoosier Oil. The 2014 Farm Bill allowed hemp to be grown for research purposes, and in 2018, Boyer became the first farmer in Indiana to raise it as a row crop in conjunction with the Purdue University Hemp Project.

Hemp is a variety of cannabis with low levels of tetrahydrocannabinol, or THC—the chemical that gets teenagers high and makes legislators nervous. Hemp fans boast that the crop, which was banned in the US along with marijuana in 1937, has over 25,000 uses, more even than the multiverse created out of corn and soy. Tens of thousands of US farmers like Boyer—facing increasing pressure from shrinking profit margins—hope that it could be the next big cash crop, and both advocates and farmers earned a major victory when the plant was legalized at the federal level under the 2018 Farm Bill, thanks in part to support from Republican Kentucky Senator Mitch McConnell.

But though many tout its benefits, Boyer has struggled to make hemp work as a crop, underscoring some experts' concerns that hype about the plant is outstripping reality. Hemp has its uses, but it's hard to grow and may become harder as climate change hits the Midwest.

The National Hemp Association, a nonprofit founded in 2014, states on its website that hemp "grows well almost everywhere," requires little fertilizer or pesticides, and can grow in the same plot "twenty years in a row without any noticeable depletion of the soil." It's also the "ultimate source of nutrition" and can feed populations during famines, according to the site's FAQ.

Hold-ups in the Indiana state legislature have kept Hoosiers behind their neighbors in Kentucky, which has already approved over 1,000 farmers to grow hemp. But Jamie Campbell Petty, co-founder of the Midwest Hemp Council, said

at least 25 Indiana farmers will gamble on hemp in 2019, growing on about 1,000 acres. According to Petty, it's possible for farmers to make more money per acre than they could with corn or soybeans, and she's encouraging them to try out the diversified income stream.

Across the Midwest, farmers need a lifeline. **Seventy-five percent** of the region's agricultural land, which contributes **\$76 billion** to the US economy, is devoted to corn and soy. Those crops are facing price declines from a combination of the ongoing trade war with **China** and **global competition**, and **experts predict** more bad news in the form of lower crop yields from the impacts of climate change and specialization.

"A lot of farmers have been traditionally trapped in the rotation of corn and soy," said National Hemp Association President Erica McBride Stark. "Hemp is not only a great rotational crop, but it's also a great cash crop for struggling farmers."

But for Boyer, growing his experimental plot—just 12 of his 1,250 acres—wasn't as easy as he expected, or as advocates heralded.

"I'd fallen into the trap of believing hemp germinates on a rock, requires no fertilizer, and that unicorns fly out of it," Boyer said, "but my experience was dramatically different." He said the crop requires unique handling and is prone to **white mold**—its near 100-year hiatus as a cash crop has hurt its ability to resist disease. And there aren't any approved pesticides or insecticides that could protect vulnerable seedlings.

Hemp doesn't like "wet feet" either. The Purdue University Hemp Project's experimental demonstration plots have shown that more rain at the time of planting often means a lower yield. And germination rates—or how many hemp seeds actually become hemp plants—have been erratic, from 20 percent of the seeds becoming seedlings to, at best, 90 percent. Janna Beckerman, a plant pathologist at Purdue who helps run the hemp program, worries that new farmers, excited about the promise of a new crop, could lose several thousand dollars on seeds with low germination rates.

"In our part of Indiana, an issue is climate," said Beckerman. "It might be too wet for us to grow hemp."

Those conditions may only grow worse: A **2018 report** co-authored by Beckerman predicts that by the middle of the 21st century, rainfall, temperatures, and carbon dioxide levels will all increase in Indiana, exacerbating the wet effects of a warm winter and early spring. Hot summers, meanwhile, will increase weed, pest, and disease pressures. The report didn't study the effects of these trends on hemp, but Beckerman suspects much of the impacts on corn and soybeans, which suffered from a drought in 2012 and heavy rain in 2015, could be even more severe for hemp.

Beckerman worries that as **family farms disappear** and industrial farms grow bigger and more specialized, farmers with fields that may seem large—several hundred acres—are struggling, and may turn to hemp without fully understanding the plant or the risks associated with growing it. She hopes to serve as a reality check.

"I'm really worried they're going to bet the farm on this," said Beckerman, who frequently fields calls from farmers hoping to invest in hemp. "Once something is a successful crop, people jump into it and then they flood the market, undermining their own price constructs."

Stark, of the National Hemp Association, is also tempering her advice to farmers. She recommends starting small—one to five acres—and making sure hemp growers have an outlet and a buyer for their product before scaling up to large,

industrial-sized operations. She expects to see hemp prices drop initially before evening out in the next year or two because "acreage is going to expand so rapidly."

Stark also admits her website's claims may "need to be refined a little bit" based on challenges farmers have seen in their fields. "Having it grow and be commercially successful aren't the same thing," said Stark. "There's a bit of a learning curve."

Boyer is still excited for the crop's potential. He's expanding his hemp operation to 100 acres in 2019, and adding hemp seed oil to his line of Healthy Hoosier products. He has three kids all under ten, and hopes the family farm will live on through a seventh generation. "We're looking at the long term," he said. "We want to be able to pass on a farm that's financially stable, so it's important to add diversified crops to our rotation."

Beckerman said the solution Midwestern farmers should look for is diversification, not just the promise of hemp as a cash crop. "Expecting hemp to fix agriculture is crazy," she said. "It's just a plant. It's a beautiful plant, but it's just a plant."

## PFAS

### Chemical Watch

#### US NGO seeks 'moratorium' on new PFASs

<https://chemicalwatch.com/76094/us-ngo-seeks-moratorium-on-new-pfass>

Lisa Jenkins

Posted: April 10, 2019

An NGO in the US has called on Congress to halt the introduction of new per- and polyfluoroalkyl substances (PFASs) until there is "sufficient scientific information" on their toxicity and persistence in the environment.

A review of TSCA chemical data reporting (CDR) information by the Public Employees for Environmental Responsibility (PEER) suggests that the number of PFAS varieties produced in or imported in very large quantities into the US has "skyrocketed", from 76 in 2002 to 118 during the most recent reporting cycle (2012-15).

In a 27 March letter to leaders of the Senate Environment and Public Works Committee (EPW), PEER said this jump has come after industry voluntarily pledged to phase out the use of two long-chain substances – PFOA and PFOS – because of their toxicity and biopersistence.

But according to Kyla Bennett, PEER science policy director, the rapid influx of short-chain substitute PFASs onto the market "makes it impossible for public health agencies to keep up with toxicology assessments in time to protect the public."

PEER has encouraged lawmakers to adopt a 'moratorium' on any new PFASs and require manufacturers to contribute to a research fund for risk assessments by toxicologists not affiliated with industry.

And the Environmental Working Group's senior scientist David Andrews agreed: "Stop allowing the chemical industry to substitute versions of chemicals known to be hazardous with new formulations that haven't been adequately tested for safety and may be just as hazardous."

However, the FluoroCouncil, a subsidiary of the American Chemistry Council (ACC), disagrees that a "blanket, one-size-fits all" approach is appropriate for PFASs. Efforts to regulate PFAS as a class, said the organisation's Robert Simon, "are not only misleading for the public, they are scientifically inaccurate".

The amended TSCA requires that new chemistries – which includes all new short-chain PFASs – have an affirmative safety determination before they are brought to market, Mr Simon told Chemical Watch.

#### A 'protective action agenda'

Meanwhile, the NGO Safer Chemicals, Healthy Families has released a 'protective action agenda' on PFAS contamination that broadly advocates phasing out their use in products.

PFASs have been used for several decades as surfactants in fire retardants, in furniture, food packaging and non-stick cookware, among other uses. But according to the SCHF, the best way to prevent pollution is to avoid putting them in consumer, commercial and industrial products at all.

A coalition of state environmental agencies echoed this request in a letter to EPA Administrator Andrew Wheeler last week.

The comments came in response to the EPA's PFAS [management plan](#). Released in February, this largely focused on cleanup of legacy substances, and was criticised by the environmental advocacy community for its lack of specificity. The groups called on Mr Wheeler to "go beyond PFOA and PFOS and beyond drinking water" in the agency's approach to PFASs. And they said the EPA should develop "appropriate measures for the entire class of PFAS chemicals" and impose more concrete timelines and deadlines for this process.

#### Congressional focus

Outside federal agencies, the class of chemicals has also increasingly drawn bipartisan attention in Congress.

The Senate EPW held a 28 March hearing focused on the federal response to PFAS-associated risks. Chairman John Barrasso (R-Wyoming) highlighted the importance of industry cooperating with the EPA, the CDC and the National Institutes of Health (NIH) "to help these agencies better detect PFAS, identify where these chemicals are produced and used and understand the risks associated with them."

And bipartisan legislation focused on PFASs has been introduced in both chambers, including:

- the PFAS Action Act (S 638 / HR 535), which would require the EPA to designate PFAS chemicals as hazardous substances under the Superfund toxics law;
- the PFAS Detection Act, which would provide the US Geological Survey with \$45m to develop new PFAS-detection technologies, and then to conduct nationwide sampling for the substances;
- the Veterans Exposed to Toxic PFASs Act, which aims to address risks posed by exposure to PFAS-containing firefighting foams at military bases, by requiring the veterans affairs department to cover the costs of resulting health problems;
- and

- the Protecting Military Firefighters from PFAS Act (S 858), which would require the Pentagon to provide blood testing for military firefighters, in order to determine potential exposure to PFASs.

The EWG's Scott Faber says that the bipartisan interest in the issue "underscores just how serious this PFAS crisis is throughout the country".

#### **Pennsylvania Capital-Star**

#### **Regulating PFAS will be harder than you think. This is why Opinion**

<https://www.penncapital-star.com/commentary/regulating-pfas-will-be-harder-than-you-think-this-is-why-opinion/>

**Jane C. Luxton, William J. Walsh and Amanda L. Tarpe**

**Posted: April 10, 2019**

Per- and polyfluorinated substances ("PFAS") are not all alike. Two – perfluorooctanoic acid ("PFOA") and perfluorooctane sulfonate ("PFOS") – are relatively well known and studied.

And then there are the rest: by various estimates, some 3,000-5,000 compounds, each different. The U.S. Environmental Protection Agency's recently issued PFAS Action Plan focuses primarily on evaluation of the need for a federal drinking water standard for PFOA and PFOS and completion of toxicity assessments (such as oral reference doses ("RfDs")) for GenX chemicals and six other PFAS.

The EPA is also working with the Centers for Disease Control ("CDC") and the Agency for Toxic Substances and Disease Registry ("ATSDR") to develop methods that will allow EPA to make inferences about the toxicity of PFAS mixtures that commonly occur in real world exposures.

These are important, scientifically sound steps, but they are not fast or easy, and the process is unlikely to satisfy public and political demands for quick answers on PFAS exposure and health impacts.

Already, citizen groups have labeled these steps "woefully inadequate" because they address "only a couple of chemicals" and criticized them as allowing the continued existence of a "known harm" from "the PFAS chemical class."

Similarly, many states and municipalities have continued to express the "need [for] an enforceable drinking water standard to protect our communities right now."

And at least one Democratic Presidential candidate has gone so far as to demand that "we have to ban ... [this] entire class of chemicals."

Despite pressure for quick action and novel regulatory approaches that would essentially assume that all chemicals containing organic fluorides are equally toxic or apply other simplifying assumptions, for four principal reasons, the issues are complex, with scientific, legal, and practice aspects that will take time to analyze.

First, multiple PFAS have been found in groundwater and surface water at an increasing number of locations (e.g., one group of EPA scientists identified 75 “priority” PFAS), increasing the complexity of the analysis.

Second, regulators do not yet agree on either a methodology or appropriate regulatory levels for PFAS. EPA (and several states) trigger remedial action based on the sum of the concentration of PFOA and PFOS exceeding a 70 part per trillion (“ppt”) limit.

However, Connecticut, Massachusetts, and Vermont are setting limits for the sum of five different PFAS, not just PFOA and PFOS.

New Jersey and New York use a lower concentration ceiling than EPA and other states (a 10 ppt limit for PFOA and PFOS).

Vermont triggers action based on the sum of five PFAS exceeding 20 ppt. The Department of Defense derived a 380 ppt action trigger allegedly using EPA’s reference dose and standard EPA groundwater clean up screening level assumptions.

Third, underlying toxicological information on the individual PFAS chemicals is sparse except for PFOA/PFOS, and interpretations differ as to the existing evidence.

For example, a recent Society of Environmental Toxicology and Chemistry conference presentation concluded that, using methods outlined in EPA general guidance, it is appropriate to group PFOA, PFOS, and perfluorononanoic acid (“PFNA”) together to set toxicity factors due to similar critical effects, half-lives, and structures, but three other PFAS compounds are not similar to PFOA and PFOS. This view is consistent with EPA’s conclusion that one of those compounds is 500 times less toxic than PFOA.

EPA’s PFAS plan says it is considering developing its own grouping of PFAS with similar effects and chemical structures using novel high through-put toxicity testing and its judgment as to the toxicity of PFAS mixtures, but this approach involves scientific “uncertainties that have not been well explored.”

It is telling that when dioxin equivalency factors, relative potencies for polychlorinated biphenyls congeners, and relative cancer potencies for polyaromatic hydrocarbons were developed, the individual chemicals within these classes were far fewer in number and yet were found to have significantly differing toxicities.

There currently is no widely accepted method to assess the toxicity of chemicals as a class on the scale presented by PFAS compounds and thus it will take time to develop one.

Fourth, speed must be balanced against the risk of legal defeats if EPA tries to expedite PFAS standard setting too much by circumventing longstanding regulatory principles.

The Safe Drinking Water Act, other statutes, and, more broadly, prerequisites of administrative law require that all stakeholders be given the opportunity to provide input in a transparent manner.

Thus, specific information on each chemical must be gathered, findings made, and standards or toxicity factors based on particularized toxicological information subjected to notice and comment before finalization, all of which will then be open to challenge in court.

Providing due process inevitably takes time.

The regulatory process must be transparent and effective risk communication requires time and effort to explain that the ultimate regulatory decision involves policy, not just scientific, decisions. Further, oversimplification and a “rush to judgment” do not produce reliable, useful results.

As one reality check, the CDC specifically stated in 2018 that “[f]inding a measurable amount of” PFCs, or more broadly PFAS, in blood “does not imply that the levels . . . cause an adverse health effect” and “[s]mall amounts [of PFAS] may be of no health consequence.”

The nature and strength of the scientific evidence and the benefits of current uses are all factors that are typically balanced in risk management decisions. Interested parties should take steps to engage as this process plays out for a range of PFAS chemicals.

Jane C. Luxton, William J. Walsh and Amanda L. Tharpe are attorneys with Clark Hill, a national and international law firm with offices in Washington D.C.

#### **Environmental Working Group**

#### **Senators Introduce Bipartisan Bill To Assist Vets, Military Families Exposed to PFAS Chemicals**

<https://www.ewg.org/release/senators-introduce-bipartisan-bill-assist-vets-military-families-exposed-pfas-chemicals>

**Alex Formuzis**

**Posted: April 10, 2019**

WASHINGTON — Sens. Jeanne Shaheen (D-N.H.) and Mike Rounds (R-S.D.) have reintroduced a bill to help veterans, service members and their families with health problems potentially triggered by exposure to the toxic fluorinated chemicals known as PFAS.

The PFAS Registry Act would establish an online database for military personnel and veterans “to receive updates on recent scientific developments on the effects of PFAS exposure, availability of possible treatment options, and information on what resources may be available to address their health concerns,” according to a news release from Shaheen.

“We applaud Sens. Shaheen and Rounds for standing up for our veterans, military members and their families who have been exposed to these contaminants while serving their country,” said Scott Faber, EWG’s senior vice president for government affairs. “There is no other group of Americans who give so much for their country and ask for so little in return. The very least we can do is provide resources to help those who are struggling with health problems caused by PFAS contamination.”

PFAS on military bases is widespread because, for nearly 50 years, the Pentagon has used firefighting foam containing these chemicals. Studies link PFAS exposure to kidney and testicular cancer, thyroid disease and weakened childhood immunity, among an array of serious health problems.

In March, EWG released a report that found water sampled on or near at least 106 military sites was contaminated with PFAS chemicals, above what EPA considers safe, according to Department of Defense data. But that’s only the tip of a toxic iceberg.

EWG’s report includes an interactive map of bases identified from a Defense Department presentation to Congress last year. It also lays out how the Pentagon long knew about the health hazards of PFAS chemicals but continued using the toxic firefighting foam until a few years ago.

EWG has called on the Trump administration and Congress to take a series of steps to protect the public from further exposure to PFAS chemicals, including directing the military to quickly clean up contaminated bases.

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The Environmental Working Group is a nonprofit, non-partisan organization that empowers people to live healthier lives in a healthier environment. Through research, advocacy and unique education tools, EWG drives consumer choice and civic action.